Return to Laboratory Evaluations

CEREC inLab (Project 04-17) (6/05)

The Sirona CEREC inLab is a CAD/CAM (computer-assisted design/computer-assisted machining) unit designed to fabricate all-ceramic inlays, onlays, copings, crowns and 3-unit fixed partial denture substructures from millable ceramic blocks. Sirona states it uses the same design/machining technology as Sironas CEREC 3D and is the first CAD/CAM unit designed for use in a dental laboratory. The CEREC inLab creates a digital image by scanning a die and then generates and displays a 3-dimensional restoration on the screen. The technician can alter the design to suit individual preferences. Once designed, the CEREC inLab mills the restoration from a block of VITA/ Ivoclar ceramic or 3M ESPE heat-cured composite. Sirona states the total processing time is 27 minutes for a coping and 76 minutes for a bridge framework. This time can be further reduced with the addition of Sirona's inEos Dental Digitizer external scanner. The CEREC inLab can be used to fabricate fully-contoured crowns and bridges or it can be used to fabricate copings only, with full-contour achieved by the traditional layered porcelain technique. Sirona provides free upgrades to its software, but charges a nominal fee for activation keys (one key required per unit fabricated). The CEREC inLab requires a conventional Pentium 4 PC, weighs 66 lbs, measures 19Wx10Hx18D, and requires 100V 230V AC, 50/60 Hz.

Manufacturer:
Sirona Dental Systems LLC
4835 Sirona Drive, Suite 100
Charlotte, NC 28273
(800) 659-5977
(704) 587-0453
(704) 587-9394 FAX
www.sirona.com

Suggested Retail Price:
$34,995.00 CEREC inLab unit (item #5884742). Price includes full system components, hardware, CEREC inLab system, AK 100 Milling Activation Key, software and 3 days training, scheduled through Vident Dental products in Brea, California, or Ivoclar Vivadent in Amherst, NY. The purchase price includes the training course fee and starter supplies of ceramic materials, delivered at the completion of training (travel expenses not included).

$14,995.00 inEos Dental Digitizer Scanner (item #6005909). Requires FireWire and serial interface.

Milling Activation keys: Avg. price: $5.00 - $13.00
100 units - $1,350.00
200 units - $2,475.00
500 units - $4,550.00
1,000 units - $7,100.00
2,000 units - $9,700.00

Millable Blocks. Average price: $20.00 - $30.00 per block.

Government Price:
$24,995.00 CEREC inLab unit (item # 5884742). Same components as above.

$11,995.00 inEos Dental Digitizer Scanner (item # 6005909). Requires FireWire and serial interface.

Milling Activation keys: Average price: $5.00 - $13.00
100 units - $1,350.00
200 units - $2,475.00
500 units - $4,550.00
1,000 units - $7,100.00
2,000 units - $9,700.00

Millable Blocks. Avg. price: $15.00 - $20.00 per block.

ADVANTAGES:
+ Fabricates inlays, onlays, veneers, copings, crowns and fixed partial denture frameworks
+ Fabricates machine-milled all-ceramic and heat-cured composite restorations
+ Ceramic/composite blocks available from 3 major manufacturers: VITA, Ivoclar, and 3M ESPE
+ Saves significant time over traditional all-ceramic/metal-ceramic fabrication method
+ Optional external scanner reduces scanning time even further
+ Initial 3-day training program provided by manufacturer
+ Technical support-line available 24/7
+ Provides option of fabricating fully-contoured crown, or coping only

DISADVANTAGES:
- Large financial commitment
- Steep learning curve
- Requires purchase of activation key for each unit fabricated
- Not indicated for low-volume dental laboratories
- No long-term clinical studies of CEREC inLab copings and frameworks

SUMMARY AND CONCLUSIONS:
The CEREC inLab is a versatile dental laboratory CAD/CAM system, designed to fabricate multiple types of ceramic and heat-cured composite restorations from VITA, Ivoclar, and 3M ESPE millable blocks. Using the same design and milling technology as the CEREC 3-D, it scans a conventional die, produces a digital image, designs a restoration, allows the technician to alter the design, and mills the restoration from a block of VITA/Ivoclar industrially-sintered porcelain or 3M ESPE heat-cured composite. A CEREC inLab unit was evaluated at an Area Dental Laboratory (ADL) and was used to produce over 600 restorations. Evaluators attended the same 3-day training course that is provided to purchasers of the CEREC inLab. Evaluators stated the training was effective and the operating manual very helpful in overcoming a steep learning curve. They felt the 24-hour technical support hotline provided readily-available, competent assistance. All evaluators agreed the CEREC inLab saved time over the traditional method of fabricating metal-ceramic and all-ceramic restorations. The remake rate was very low once the initial learning curve was overcome, and there was no negative feedback from the clinicians who inserted the restorations. Most evaluators used the unit to fabricate copings, preferring to complete the restoration with the traditional layered porcelain technique. The ADL purchased its own CEREC inlab midway through the evaluation and all evaluators said they would recommend this unit to other dental laboratories. The **CEREC inLab** is rated **Excellent** for use in large-volume USAF dental laboratories.